DYUBYUK, A.F.; BIBIKOVA, T.N.; TRUBNIKOV, B.N.

Effect of mountainous topography and the sea on the formation of summer clouds over the southern Crimea. Trudy UkrNIGMI no.26:74-85 '61. (MIRA 15:2)
(Crimea--Clouds)

DYUBYUK, A.F.; BIBIKOVA, T.N.; TRUBNIKOV, B.N.

Cloud characteristics for typical summer synoptical situations on the Crimean Peninsula. Trudy UkrNIGMI no.26:86-94 '61. (MIRA 15:2)

(Crimea--Clouds)

BIBIKOVA, T.N.; DYUBYUK, A.F.; TRUBNIKOV, B.N.

Macroscopic changes in orographic clouds. Trudy TSAO no.39:84-91 '62. (MIRA 15:6)

(Clouds).

ACCESSION NR: AT4011398 S/2789/63/000/047/0085/0095

AUTHOR: Dyubyuk, A. F.; Bibikova, T. N.; Trubnikov, B. N.

TITLE: Conditions for the formation of altocumulus lenticularis clouds in the Crimea

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy*, no. 47, 1963. Fizika oblakov, 85-95

TOPIC TAGS: meteorology, cloud, aerology, altocumulus cloud, lenticular cloud, aerial survey, photogrammetry, photogrammetric survey

ABSTRACT: An expedition was organized by the Kafedra fiziki atmosfery MGU (Department of Atmospheric Physics of Moscow State University) in 1957-1960 to study the conditions under which altocumulus lenticularis clouds are formed in the coastal and mountainous regions of the Crimea. The mission included a photogrammetric survey of clouds; a photographic survey of clouds with a spherical mirror, revealing the cloud cover throughout the sky; a panoramic cloud survey; and slow-motion movies of cloud movement and development. Aerial observations were supplemented by standard radiosonde and surface observations. A series of individual cases is described in detail, typical of the 51 cases studied. The synoptic situation and orographic conditions are emphasized. It is explained why such

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ACCESSION NR: AT4011398

clouds are a frequent occurrence in the studied region although physical and geomorphological conditions should not favor their development. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: TSENTRAL'NAYA AEROLOGICHESKAYA OBSERVATORIYA (Central Aerological Observatory)

SUBMITTED: 00	DATE ACQ: 24Feb64	ENCL: 00
SUB CODE: AS	NO REF SOV: 002	OTHER: 000

Card 2/2

L 00976-65 EWT(1)/FCC AFETR GW

ACCESSION NR: AP5000430 S/0050/64/000/012/0024/0030

AUTHORS: Musayelyan, Sh. A. (Candidate of physico-mathematical sciences); Bibikova, T. N.

TITLE: Fluctuations in lenticular altocumulus clouds

SOURCE: Meteorologiya i gidrologiya, no. 12, 1964, 24-30

TOPIC TAGS: cloud, atmosphere, humidity

ABSTRACT: The authors considered an infinite layer of atmosphere of definite thickness with a given distribution of temperature and humidity. The formation of a wave in this layer, such as one of orographic origin, and the redistributional pattern of temperature and moisture in the wave zone are studied to find how these characteristics will change with time. Simple formulas are taken from Sh. A. Musayelyan (Nekotoryye tochnyye resheniya uravneniya perenosa i ikh prilozheniya k zadacham fiziki volnovykh oblakov. Izvestiya AN SSSR, ser. geofiz., No. 5, 1964), and from these are derived the following two expressions for moisture and temperature:

$q(x, z, t) = q_0 e^{-c^2\left(z - \frac{1}{n}e^{-\delta x}\sin\omega x\right)}$ and $T = T_0 - \gamma z - \frac{1}{n}(\gamma_a - \gamma)e^{-\delta x}\sin\omega x$, where t is time, q_0 initial humidity, c^2 a constant depending on materials used in observation, n a constant having the dimensions of velocity, γ and δ constants, $\omega = 2\pi/L$

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L 20976-65

ACCESSION NR: AP5000430

(L = wavelength), γ the vertical temperature gradient, and γ_a the dry adiabatic temperature gradient. The authors then examine consecutive photographs of a cloud mass, noting the changes in space and time. They conclude that the clouds form in cells and that this character may be explained by considering two two-dimensional wave currents moving at some angle to each other. The vertical fields of each system may be zero, positive, or negative at any instant, and combinations of these make possible reinforced upward currents, reinforced downward currents, or somewhat cancelled zones. The distribution of these combinations in space gives rise to cells. It is therefore concluded that when such conditions obtain in nature, clouds may form in cells and these may fluctuate with time. Orig. art. has: 2 figures and 24 formulas.

ASSOCIATION: Mirovoy meteorologicheskiy tsentr, Moskovskiy gosudarstvenny*y universitet (World Meteorological Center, Moscow State University)

SUBMITTED: 31Mar64

SUB CODE: ES NR REF SOV: 005 ENCL: 00

OTHER: 000

Card 2/2

L 2565-66 EWT(1)/FCC GW

ACCESSION NR: AT5024892 UR/2531/65/000/171/0130/0143

AUTHORS: Dyubyuk, A. F.; Bibikova, T. N. 38 35 B+1

TITLE: Conditions of the formation of cloudiness as a function of orography

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 171, 1965. Rezul'taty issledovaniya atmosfernoy turbulentnosti na vertoletnykh trassakh (Results of the investigation of atmospheric turbulence on helicopter routes), 130-143

TOPIC TAGS: cloud formation, cloud physics, orography, meteorologic observation

ABSTRACT: Observations of the conditions for development and growth of clouds (and their interpretation in terms of the heterogeneity of the earth's surface) have been studied in the mountainous regions of southern Crimea. Such information is important in predictions of cloud formations representing danger to helicopter and airplane flights. Complex photographic methods used in the study included surveys with photographic cameras of various systems, panoramic photography, simultaneous photography of the total horizon on one frame by means of a spherical mirror, photogrammetric survey for determining spatial coordinates of the clouds,

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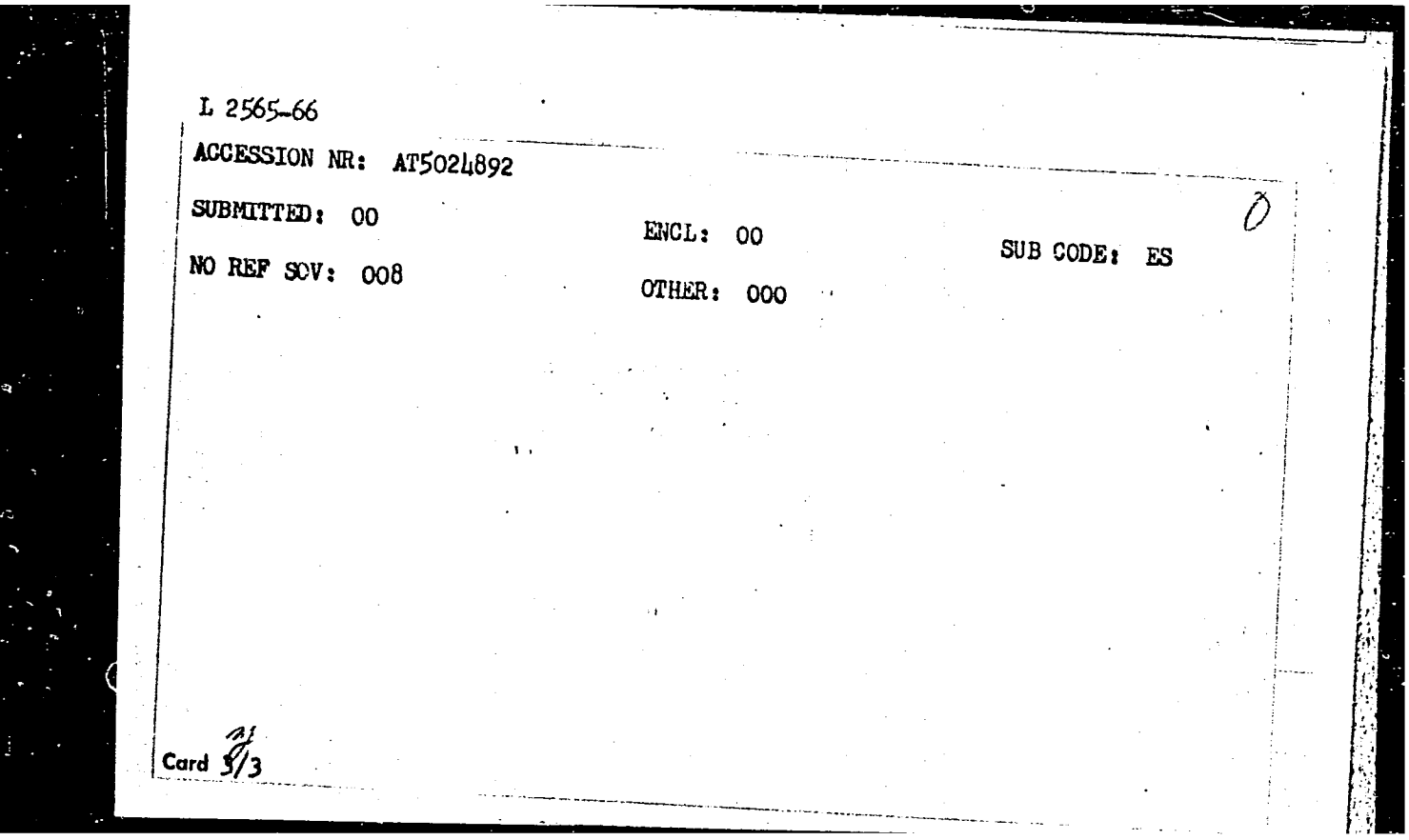
ACCESSION NR: AT5024892

slow-motion photography to clarify the development of clouds. At the same time meteorologic and balloon observations were taken. It was established that the strongly overheated regions of the Crimean monoclinic limestone plateau give rise to upward air currents which form cumuli. The vertical mixing of air often results in formation of a thermal turbulence, if in addition to the vertical temperature differences (not very effective) a horizontal temperature difference also exists. Under such conditions, a strong helicopter bumping was observed on the flight route Simferopol-Yalta. Windward waves of air, if moist enough, create lenticular clouds (Ac lent.) in the leeward air waves. These waves cause updrafts and turbulence dangerous to helicopters and airplanes. The cloudiness indicates the existence of a strong northwestern wind, normal to the mountain range, which is undoubtedly of orographic origin. From the leeward side of the mountains clouds dangerous to helicopter flights are observed. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Fizicheskiy fakultet, kafedra fiziki atmosfery (Moscow State University, Department of Physics, Chair of Atmospheric Physics)

55,44

Card 2/3



L 2565-66

ACCESSION NR: AT5024892

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 000

0

Card 3/3

IL'YASHEVICH, V.A.; BOL'SHAKOVA, N.S., inzh.; LOPES, G.S.; BIBIKOVA, T.T., inzh.-khimik

Continous bleaching of cotton fabrics in open width on the AO -110 production line. Tekst.prom. 21 no.12:37-43 D '61. (MIRA 15:2)

1. Ispolnyayushchiy obyazannosti zaveduyushchego laboratoriyey varochnootbel'nykh mashin Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo mashinostroyeniya (for Il'yashevich). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut tekstil'nogo mashinostroyeniya (for Bol'shakova). 3. Glavnyy inzh. otbel'no-krasil'noy fabriki Glukhovskogo khlopchatobumazhnogo kombinata imeni V.I.Lenina (for Lopes). 4. Khimicheskaya laboratoriya Glukhovskogo khlopchatobumazhnogo kombinata imeni V.I.Lenina (for Bibikova).

(Bleaching)
(Assembly-line methods)

BIBIKOVA, V. A.

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens.

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19673

Author : Bibikova, V.A., Murzakhmetova, K.
Inst : -
Title : Testing DDT and BHC in Controlling Ectoparasites of Large Gerbil.

Orig Pub : Tr. Sredne-Aziatsk. n.-i. protivochumn. in-ta, 1955, No 3, 73-77

Abstract : Tests were conducted in the laboratory and on the field of the effect of DDT and BHC (containing respectively 6 and 12% of active substance) on fleas of large gerbil (Meriones sylla gerbilli minax predominated, but there were also winter types of fleas, etc.). Minimal lethal doses of DDT and BHC powders for fleas in containers with sand were correspondingly 0.73 mg/cm^2 and 0.37 mg/cm^2. When burrows of large gerbil were dusted with DDT and BHC by a piston

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Abs Jour : Ref Zhur - Biol., No 5, 1958, 19673

duster with 6 and 3 g per entrance, the number of fleas at entrances of treated burrows on the 3rd, 10th and 20th day after treatment was 1/9 -1/20 and less by comparison with the control. Results of DDT and BHC applications are about the same. Dusting after destruction of gerbil is most rational. In the Balkhash region, where gerbils were destroyed in the spring of 1951, entrances to gerbil burrows were treated by DDT on a territory of 300 hectares. DDT powder was applied at a rate of 1.5 g to the entrance by dosage spoons. After 9 days it was noted that the number of fleas at the burrow entrances was decreased by 91-93% by comparison with the initial number. The cost of treatment per hectare when the density of colonies was ~1.5 per hectare was 2 rubles, 19 kopeks; 20 workers in 6 hours were able to treat 100 hectares. This method is recommended for

PETRISHCHEVA, P.A.; SAF'YANOVA, V.M.; BIBIKOVA, V.A.; GROKHOVSKAYA, I.M.

Protection of humans from bloodsucking insects in reclamation of new areas. Zool.zhur. 33 no.2:361-372 Mr-Ap '54. (MLRA 7:5)

1. Otdel parazitologii i meditsinskoy zoologii (zaveduyushchiy - akademik Ye.N.Pavlovskiy) IEM Akademii meditsinskikh nauk SSSR im. N.F.Gamaleya.
(Insecticides)

BIBIKOV,D.I.; BIBIKOVA,V.A.;

Study of the wheatear Oenanthe isabellina Temm. and its ecto-parasites. Zool.zhur. 34 no.2:399-407 Mr-Ap '55. (MLRA 8:6)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut epidemiologii i mikrobiologii.

COUNTRY : USSR.
CATEGORY : Zoological Parasitology. Acarids and Insects G as Disease Vectors. Insects.
ABS. JOUR. : RZhBiol., No. 14,1958, No. 62693.

AUTHORS : Bibikova, V. A.; Sakharova, V. V.
INST. : Central-Asian Scientific-Research Anti-Plague *
TITLE : Infestation Capacity of the Fleas Oropsylla silantiewi and the Effect of Its Repeated Blood-sucking and Content Temperature.
ORIG. PUB. : Tr. Sredne-Aziatsk. n.-i. protivochumn. in-ta, 1956,vyp. 2, 41-48.
ABSTRACT : Conditions of the carrier's existence and its physiological state, connected with the conditions of existence, indicate a considerable influence on the multiplication and, consequently, on the formation of a "bloc" causing contagious bites. A series of experiments in the transmission of Plague -infection by the fleas O. Silantiewi, at various regimes of feeding conditions, on the infected animals,

CARD: 1/3

*Institute.

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BIBIKOVA, V.A.

Mites of the family Gamasidae in southeastern Kazakhstan.
Trudy Inst. zool. AN Kazakh. SSR 5:152-160 '56. (MLRA 9:12)

(Kazakhstan--Mites)

BIBIKOVA, V.A.; VOLOKHOV, V.A.; SINTSOVA, V.I.

Possiblie epizootologic role of bird fleas. Med.paraz. i paraz.bol. 25 no.2:160-162 Ap-Je '56. (MLRA 9:8)

1. Iz Sredneaziatskogo nauchno-issledovatel'skogo protivochumnogo instituta.

(FLEAS
of birds, transmission of plague in rodents)
(PLAGUES, transmission
by bird fleas in rodents)

BIBIKOVA, V. A., SHMUTER, M. F., BOTMAN, E. P., BURDELOV, A. S., ZHURAVLEVA, V. I., KALUZHENOVA, Z. P., MARTINEVSKIY, I. L., MOROZOVA, I. V., PEYSAKHIS, L. A., ROSSINSKAYA, O. B., SVIRIDOV, G. G.

"Certain laws governing the plague epizootic in the south Balkhash area (Ili-Karatal interfluve)." p. 277

Desyatoye Soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

Central Asiatic Antiplague Inst./Alma Ata

BIBIKOVA, V. A., SHMUTER, M. F., EGOROVA, N. P., VOLOKHOVA, V. A., [illegible]SINOVA, I. I.

"The pathogenesis of the plague infection among various types of sand-rats." p. 280

Desyatoye Soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

Central Asiatic Antiplague Inst./Alma-Ata

BIBIKOVA, V.A.; MEDVEDEVSKIKH, V.I.; DANKOV, S.S.

Epizootiological role of the fleas of greater gerbils. Report No.4. Xenophylla skrjabini Ioff 1928. Med. paraz. i paraz. bol. 32 no.5:622 S-O'63 (MIRA 16:12)

1. Iz Sredneaziatskogo nauchno-issledovatel'skogo protivochumnogo instituta i Gur'yevskoy protivochumnoy stantsii.

SHLUGER, Ye.G.; BIBIKOVA, V.A.; TROFIMOVA, R.K.

A new chigger species of the genus Trombicula (Acariformes, Trombiculidae). Trudy Inst. zool. AN Kazakh. SSR 14:182-184 '60. (MIRA 13:12)

(Turkmenistan—Chiggers (Mites))

BIBIKOVA, V.A.; IL'INSKAYA, V.L.; KALUZHENOVA, Z.P.; MOROZOVA, I.V.; SHMUTER, M.F.

Biology of fleas of the genus Xenopsylla in Sary-Ishik-Otrau. Zool. zhur. 42 no.7:1045-1051 '63. (MIRA 17:2)

1. Central-Asian Research Anti-Plague Institute, Alma-Ata.

MOROZOVA, I.V.; BIBIKOVA, V.A.; KALUZHENOVA, Z.P.

Fauna of gamasid mites (Parasitiformes, Gamasoidea) in the sands of Sary-Ishikotrau. Zool. zhur. 42 no.12:1872-1876 '63 (MIRA 17:7)

1. Central Asiatic Research Anti-Plague Institute, Alma-Ata.

BGYTOVA, S.I.; BIBIKOVA, V.A.; BERENDYAYEVA, E.L.

A new species of gamasid mites Haemogamasus bifurcatus sp.n. from the Tien Shan. Zool. zhur. 43 no.1:136-138 '64
(MIRA 17:7)

1. Central Asiatic Research Anti-Plague Institute, Alma-Ata.

MOROZOVA, I.V.; BIBIKOVA, V.A.; USHAKOVA, G.V.

Bat ticks of Kazakhstan. Trudy Inst. zool. AN Kazakh. SSR 22: 161-165 '64. (MIRA 17:12)

MASLENNIKOVA, Z.P.; MOROZOVA, I.V.; BIBIKOVA, V.A.

Ticks of the subfamily Ixodoidea of mammals in the Saryishikotrau desert. Trudy Inst. zool. AN Kazakh. SSR 22:166-173 '64.
(MIRA 17:12)

BIBIKOVA, V.A.; SHASHAYEV, M.A.; RESHETNIKOVA, P.I.; SHAPIRA, I.L.

Method of laboratory feeding of fleas in studying their role in the preservation and transmission of the pathogens of infectious diseases. Med. paraz. i paraz. bol. 33 no.6:739-740 N-D '64. (MIRA 18:6)

1. Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy institut, Alma-Ata.

ACC NR: AP7001165 (AN) SOURCE CODE: UR/0439/65/044/008/1214/1218

AUTHOR: Bibikova, V. A.; Gorbunova, A. I.; Maslennikova, Z. P.; Morozova, I. V.; Shmuter, M. F.--Schmuter, M. F.

ORG: Central Asian Antiplague Research Institute, Alma-Ata (Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy institut)

TITLE: Method of studying population density of fleas in Rhombomys opimus Licht.

SOURCE: Zoologicheskiy zhurnal, v. 44, no. 8, 1965, 1214-1218

TOPIC TAGS: flea, flea reproduction, flea migration, plague transmission, disease vector, mole

ABSTRACT: A technique for total count of fleas found in the burrows of Rhombomys opimus Licht. is described. The technique consists of trapping and counting the migrating parasites after the animals are removed from the burrows. Due to a relatively stable migration and the reproduction rate of fleas, three samples suffice for the total count. In practical terms, it means that all fleas present in the burrows can be trapped during the 7—45 day period after the removal of the animals. The total flea population in the burrows can be estimated on the basis of the relatively

Card 1/2 UDC: 595.775:599.323.4 Rhombomys:591.526-59.08

SMOL'SKIY, N.V.; BIBIKOVA, V.F.

Some data on the biology of flowering in lilacs. Sbor. nauch. rab. TSBS no. 1:42-51 '60. (MIRA 14:10)
(Lilacs)
(Plants, Flowering of)

BIBIKOVA, V.F.

Principles underlying the planning of a continuously flowering garden. Sbor. nauch. rab. TSBS no.1:52-59 '60. (MIRA 14:10)

(Minsk--Botanical gardens)

SMOL'SKIY, N.V.; BIBIKOVA, V.F.

Species and varieties of lilacs for greenbelts and parks of White Russia. Sbor. nauch. rab. TSBS no.2:65-72 '61. (MIRA 15:7)
(White Russia--Lilacs--Varieties)

BIBIKOVA, V.F.

Time for budding rose varieties. Sbor. nauch. rab. TSBS no.2: 118-125 '61. (MIRA 15:7)
(White Russia--Roses) (Budding)

BIBIKOVA, V.F. [Bibikava, V.F.]

Effect of boron on pollen germination and the growth of pollen tubes in some lilac species. Vestsi AN BSSR Ser. biial. nav. no.3:41-45 '64 (MIRA 18:1)

BIBIKOVA, V.F. [Bibikava, V.F.]

Seasonal rhythm of growth and development of some lilac species. Vestsi AN BSSR. Ser. biial nav. no.1:45-54 '65. (MIRA 18:5)

SMOL'SKIY N.V.; BIBIKOVA, V.F.

Prolonged preservation of the pollen of lilacs as related to their hybridization. Dokl. AN BSSR 9 no.2:122-124 F '65. (MIRA 18:5)

1. TSentral'nyy botanicheskiy sad AN BSSR.

BIBIKOVA, V.F.

Effect of temperature on the germination of pollen in some species of lilac. Bot.; is. 1. Bel. otd. VBO no. 7:154-158 '65. (MIRA 18:12)

SOV-26-58-3-39/51

AUTHOR: Bibikova, V.I., Candidate of Biological Sciences; Kolosov, Yu.G.

TITLE: The Fauna of the Temnaya Cave (Fauna peshchery Temnaya)

PERIODICAL: Priroda, 1958, Nr 3, p 115 (USSR)

ABSTRACT: The Temnaya Cave is situated in the deep and steep Kubalar-Dere ravine near the village of Peredovoye in the Kuybyshev District on the Crimean Penisula. The argillaceous soils of the cave were investigated by the Crimean Archeological Expedition of the Institut arkheologii AN USSR (Institute of Archaeology of the AS UkrSSR) and the Institut istorii material'noy kultury AN SSSR (Institute of the History of Material Culture of the AS USSR). Bones of elephants, big and small hoofed animals, rhinoceroses, wild boars, asses, wolves, Tartar, Polar and common foxes, cave hyenas and fish were found. The faunistic complex of the Temnaya Cave is typical for the Mousterian period and can be related to the Riss or Riss-Wurm periods. In the Quaternary fauna of the Crimean Peninsula, the presense of mammoth and rhinoceros were also noticed.

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The Fauna of the Temnaya Cave

SOV-26-58-3-39/51

ASSOCIATION: Institut arkheologii Akademii nauk USSR-Kiyev (Institute of Archaeology of the AS UkrSSR-Kiyev)

1. Archeology--USSR 2. Geology--USSR

Card 2/2

BIBIKOVA, V.I.

Some distinctive features of the extermital bones of the genera Bison and Bos [with summary in English]. Biul.MOIP.Otd.biol. 63 no.6:23-35 N-D '58 (MIRA 12:1)
(BOVIDAE, FOSSIL)
(EXTREMITIES (ANATOMY)

BIBIKOVA, V.I.

Distribution of the remains of wild boars in the Quaternary period. Biul. Kom. chetv. per. no.25:107-112 '60. (MIRA 14:1)
(Wild boar)

BIBIKOVA, V.I.

SOV/136-58-11-9/21

AUTHORS: Lelikman, A.N., Bibikova, V.I., Petrov, V.M., Postnikova, S.V., Abushir, G.I., Pritula, V.F. and Nikitina, L.N.

TITLE: Study of the Behaviour and Recovery of Rhenium in the Roasting of Molybdenite Concentrates in a Fluidized-Red Roaster (Izucheniye povedeniya i ulavliveniya reniya pri obzhige molibdenitovykh kontsentratov v pechi kipyashchego sloya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 11, pp 47-52 (USSR)

ABSTRACT: The rhenium concentration in some molybdenite concentrates from ores of mainly copper-molybdenum deposits reaches 0.02 - 0.10% and these are one of the principle sources of the element. In 1956 a rare-metals works adopted fluidised roasting; the composition of a batch of concentrate being 49.35% Mo, 35.42% S (total), 0.73% Cu, 2.90% Fe, 6.95% SiO_2, 0.68% Cu, 0.12% W, 0.025% Re, 0.033% Se, traces of Ta, 4.0% H_2O, 2.2% flotation reagents. The plant has a rotary kiln and a fluidised roaster discharging into a common electrostatic precipitator. Analysis of samples (table 1) shows a 94.8-% distillation of rhenium in

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Study of the Behaviour and Recovery of Rhenium in the Roasting of Molybdenite Concentrates in a Fluidised-Bed Roaster

the fluidised roaster, compared with 50% for the rotary kiln but the existing dust-catching system involved 79.5% loss of rhenium in the waste gases. A bubbler (fig.1) installation type VSPU designed by Gintsvetmet which could deal with part of the gas was tested and found to be 89-96% efficient with respect to rhenium, most (75-92%) of the quantity trapped being in the form of soluble compounds; the losses of liquid from the bubbler were shown to be due to evaporation rather than mechanical entrainment. Removal of pulp from the bubbler is recommended when pulp acidity becomes 30-60 g/litre and rhenium concentration 0.15 - 0.30 g/litre. The installation is recommended by the authors. The Mintsvetmetzoloto large laboratory fluidised roaster (fig.2) was used to study the behaviour of rhenium and its recovery in the roasting of low-grade molybdenite concentrates (20.5% Mo, 17.5% S (total), 26.3% SiO_2, 4.06% Cu,

Study of the Behaviour and Recovery of Rhenium in the Roasting of Molybdenite Concentrates in a Fluidized-Bed Roaster

1.60% CaO, 7.16% Fe, 0.21% W, 0.04% Re) at 590-630°C and an air velocity in the stack of 8-9 cm/sec (giving an hourly productivity of 75-80 kg/m^2 of hearth area). A materials balance (table 3) for a 12 hour run shows that the method is successful with such concentrates; the distillation of rhenium being 93.2% of the quantity in the concentrate. There are 2 figures and 3 tables.

Card 3/3

PYATNOV, V.I.; BIBIKOVA, V.I.; DARVOYD, T.I.; IVANOVA, R.V.; KASATKINA, N.A.; GINZBURG, A.I., nauchnyy red.; NEMANOVA, G.F., red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirements as to quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., perer. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. No.53. [Thallium, indium, gallium] Tallii, indii, galiii. By V.I.Piatnov i dr. Nauchn. red. A.I.Ginzburg. 1961. 53 p. (MIRA 14:11)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Thallium) (Indium) (Gallium)

SAVITSKIY, Ye.M., doktor khim. nauk, otv. red.; RYABCHIKOV, D.I., doktor khim. nauk, red.; BIBIKOVA, V.I., doktor khim. nauk, red.; TYLKINA, M.A., kand. tekhn. nauk, red.; POVAROVA, K.B., inzh., red.; MAKARENKO, M.G., red. izd-va; SIMKINA, G.S., tekhn. red.

[Rhenium; transactions] Renii; trudy. Moskva, Izd-vo Akad. nauk SSSR, 1961. 278 p. (MIRA 15:1)

1. Vsesoyuznoye soveshchaniye po probleme reniya, 1958. (Rhenium)

S/697/61/000/000/003/018
D228/D303

AUTHORS: Bibikova, V. I., Oleynikova, K. V., Postnikova, S. V. and Khazanova, T. P.

TITLE: Behavior of rhenium during the roasting of molybdenite concentrates and technologic methods of obtaining it

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 37-41

TEXT: The authors describe their investigation of: (a) distribution of Re in almost all molybdenite concentrates being processed in the USSR, (b) distribution of Re in Cu-Mo ore from three beneficiation plants, and (c) general behavior of Re during the roasting of molybdenite concentrates. They also suggest certain refinements in the production technique for Re. Concentrates from deposits in

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Armenia, Kazakhstan and Uzbekistan are characterized by rather high Re contents which exceptionally rise to 0.1%; in those from other Siberian and Far Eastern deposits, however, the maximum concentration was not found to exceed 90 p.p.m. Data given in a table show that in the case of ore from three beneficiation plants the Mo-fraction holds up to 5 times as much Re as the Cu-fraction. Graphs are presented to illustrate the higher vapor-tension of Re_2O_7 as compared with MoO_3 at different temperatures. The authors stress the need for an excess of air during the roasting of concentrates if the formation of ReO_3 and ReO_2, which have a lower vapor-tension, is to be avoided. It is also noted that Re is most fully sublimated in furnaces of the boiling-layer type; here, 95% of the metal passes into gaseous phase, whence it is best recovered by means of a wet Cottrell filter or a rapid foam-bubbler. Turning to the question of Re production technology, which is at present largely governed by the high and low solubilities of Re_2O_7 and $KReO_4$, the authors describe their attempts to reduce $KReO_4$ and

NH_4ReO_4 with H_2. This was done in 2 two-hourly stages -- first at 480 - 500°C, and then at 900 - 1000°C. Washing the resulting powder with HCl increases the purity of Re, but decreases the direct yield of metal from 95 - 98 to 92 - 93%. There are 2 tables and 1 figure.

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S/697/61/000/000/004/018
D228/D303

AUTHORS: Zelikman, A. N., Bibikova, V. I., Petrov, V. M., Postnikova, S. V., Abashin, G. I., Pritulo, V. F. and Nikitina, L. N.

TITLE: Study of the behavior and recovery of rhenium during the roasting of Kadzhara and Koundrad molybdenite concentrates in a boiling layer

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaye komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 42-50

TEXT: The authors present the results of their study of: (a) the distribution of Re in the products obtained from roasting Kadzhara molybdenite concentrates in a boiling-layer furnace, (b) the recovery of Re from waste gases of a boiling-layer furnace by means

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of a bubbling unit, and (c) the behavior of Re during the calcining of Koundrad concentrates in the same type of furnace and the extraction of Re with a similar bubbling unit. A tentative scheme is also suggested for reprocessing bubbler pulp to obtain metallic Re. It is noted that recent research at the Institut tsvetnykh metallov im. M. I. Kalinina (Institute of Non-Ferrous Metals im. M. I. Kalinin) has indicated the advantages of the boiling-layer furnace as compared with tubular, muffle, and reverberatory types. Diagrams illustrate the dust-collection system of the boiling-layer furnace, the bubbling unit designed by the Gintsvetmet (State Institute of Non-Ferrous Metallurgy) for the recovery of furnace gases, and the laboratory model of the boiling-layer furnace employed by the authors in their tests. The Re distribution in the roasting products of Kadzhara concentrates, the Re content of bubbler pulp, and the Re balance for both the bubbler and the furnace as a whole are given in tables. Conclusions: 1) The roasting of Kadzhara concentrates in a boiling-layer furnace ensures the fullest sublimation of Re; 92 - 96% of the Re is sublimated in this type of furnace

as compared with only 50 - 67% in muffle and rotary tubular furnaces. 2) The existing dust-collection system of the boiling-layer furnace does not guarantee a satisfactory degree of Re extraction, since the loss of metal in waste gases amounts to about 80%. The lowering of the temperature of the Cottrell filter to 55 - 80° does not reduce this loss on account of the condensation of H_2SO_4. 3) Much better results can be obtained with the bubbling unit, and the bubbler's efficiency with respect to Re is stated to equal 89 - 96%. 75 - 92% of the metal in the bubbler pulp is in solution, and the concentration of dissolved Re rises as the duration of the bubbling lengthens. It is recommended that the pulp be removed from the bubbler when the Re concn. and acidity of the solution is 0.15 - 0.3 and 30 - 50 g/l respectively. 4) The high degree of Re sublimation (92-93.2%) from the ash of Koundrad concentrate shows that the same technique can also be applied to this material; there is no difference in the behavior of Re during the roasting of both concentrates and the processing of their gaseous products in the bubbling unit. There are 3 figures and 4 tables. [Abstracter's note: p.48 of the photostat copy is illegible.]

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S/697/61/000/000/009/018
D228/D303

IP.3100

AUTHORS: Bibikova, V. I., Postnikova, S. V. and Oleynikova, K.V.

TITLE: Methods of preparing rhenium of high purity

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Mezhduvedomstvennaya komissiya po redkim metallam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR, 1961, 75-80

TEXT: The aim of this work, which was carried out at the Giredmet (State Institute of Reduction Metallurgy), was to obtain metal containing minimal amounts of K and Ca and <5 p.p.m. Pb, Sn, Cd, Bi, and Sb. The separation of metals by sublimation is largely governed by their vapor tensions at high temperatures, as is shown diagramatically for As, Pb, Sn, Bi, and Sb in the temperature range 350 - 2300°C. One method recommended by the authors consists of

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Methods of preparing ... S/697/61/000/000/009/018
D228/D303

the vacuum heating of compressed Re powder for 2 hours to a temperature of 2500°C; the metal thus obtained is 99.988% pure. No attempt was made to determine the content of the gases, but the data of C. T. Sims et al. are quoted in this respect. The results of the study of the effect of the temperature and duration of heating on the removal of Pb and 12 other elements are illustrated by means of graphs and tables. They indicate that equally pure Re can be prepared at a lower temperature (~2050°C) if the period of heating is increased to 4 - 6 hours. Further data are then adduced to show that the K and Ca contents of metallic Re can be lowered to <0.02 and 0.002% respectively by means of a method, entailing the redn. of NH_4ReO_4 with H_2 and the subsequent heating of the residue to 1600 - 2500°C in vacuo. There are 2 figures, 4 tables, and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. /Abstracter's note: One of the non-Soviet-bloc references is a Russian translation. / The references to the English-language publications read as follows: E. M. Sherwood, D. M. Rosenbaum and J. M. Blocher, J. electrochem. Soc., 102, no. 11, 650, (1955); C. T. Sims, J. Metals, January, 168, (1955).

Card 2/2

NIKOVA, V.I., IVANOVA, R.V.

"Technologisxhe methoden der gewinnung von metallischem gallium aus aluminiumrohstoffen."

Report submitted to the 14th Congress on Mining and Metallurgy. Freiberg, GDR 13-16 June 1962

LEBEDEV, Konstantin Borisovich; BIBIKOVA, V.I., doktor tekhn.nauk, retsenzent; EL'KIND, L.M., red.izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Rhenium] Renii. 2. izd., perer. i dop. Moskva, Metallurgizdat, 1963. 207 p. (MIRA 16:10)

(Rhenium)

BIBIKOVA, V. I.

995-4 21 June

RHENIUM CONFERENCE (USSR)

Tsvetnyye metally, no. 4, Apr 1963, 92-93. S/136/63/000/004/004/004

The Second All-Union Conference on Rhenium, sponsored by the Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR, and the State Institute of Rare Metals, was held in Moscow 19-21 November 1962. A total of 335 representatives from 83 scientific institutions and industrial establishments participated. Among the reports presented were the following: autoclave extraction of Re from Cu concentrates (A. P. Zelikman and A. A. Peredereyev); Re extraction from the gaseous phase (V. P. Savrayev and N. L. Peysakhov); recovery of Re by sorption and ion interchange (V. I. Bibikova, V. V. Il'ichenko, K. B. Lebedev, G. Sh. Tyurekhodzhayeva, V. V. Yermilov, Ye. S. Raimbekov, and M. I. Filimonov); production of carbonyl Re (A. A. Ginzburg); electrolytic production of high-purity Re and electroplating with Re (Z. M. Sominskaya

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AID Nr. 995-4 21 June

RHENIUM CONFERENCE [Cont'd]

S/136/63/000/004/004/004

and A. A. Nikitina); Re coatings on refractory metals produced by thermal dissociation of Re chlorides (A. N. Zelikman and N. V. Baryshnikov); plastic deformation and thermomechanical treatment of Re (V. I. Karavaytsev and Yu. A. Sokolov); growth of Re single crystals and effect of O_2 on their properties (Ye. M. Savitskiy and G. Ye. Chuprikov); Re-Mo, Re-W, and Re—precious-metal alloys (Ye. M. Savitskiy, M. A. Tylkina, and K. B. Povarova); synthesis of Re nitrides, silicides, phosphides, and selenides (G. V. Samsonov, V. A. Obolonchik, and V. S. Neshpor); weldability of Re-Mo and Re-W alloys (V. V. D'yachenko, B. P. Morozov, and G. N. Klebanov); new fields of application for Re and Re alloys (M. A. Tylkina and Ye. M. Savitskiy); and Re-Mo alloy for thermocouples (S. K. Danishevskiy, Yu. A. Kocherzhinskiy, and G. B. Lapp). [WW]

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L 23877-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG/MLK

ACCESSION NR: AT5002754 S/0000/64/000/000/0036/0039

AUTHOR: Postnikova, S. V.; Bibikova, V. I. (Doctor of technical sciences); Fedorov, P. I.

TITLE: Physicochemical principles of the hydrometallurgical method of rhenium refininf

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 36-39

TOPIC TAGS: rhenium, rhenium refining, hydrometallurgical refining, molybdenum concentrate, calcium molybdate, potassium perrhenate

ABSTRACT: The authors studied the system $Ca(ReO_4)_2$ - $CaMoO_4$ - H_2O at 20 and 75C by the isothermal method for the purpose of elucidating the degree and nature of the trapping of rhenium by the precipitate formed as a result of the neutralization of acidic molybdenum concentrates with calcium oxide. It was found that when molybdenum is precipitated by calcium oxide, rhenium and molybdenum coprecipitate until the latter has completely separated, and rhenium is thought to enter into the crystal lattice of calcium molybdate. After the precipitation of the latter,

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ACCESSION NR: AT5002754

the trapping of rhenium is due to adsorption processes. The experiments elucidated the general nature of the distribution of rhenium during the precipitation of calcium molybdate. In addition, the authors investigated the conditions of maximum separation of rhenium when it is precipitated in the form of potassium perrhenate by potassium chloride. To this end, they studied the equilibria in the ternary systems $KReO_4$ - KCl - H_2O at 0, 25, 50, and 75C, and NH_4ReO_4 - NH_4Cl - H_2O at 0, 25, and 75C by the solubility method (under isothermal conditions). On the basis of this investigation, optimum technological conditions were selected for the process of rhenium refining. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 2/2

L 23878-65 EWT(m)/T Pc-4 RM/MLK

ACCESSION NR: AT5002756 S/0000/64/000/000/0044/0049

AUTHOR: Bibikova, V. I. (Doctor of technical sciences); Il'chenko, V. V.; Semenova, Z. A.

TITLE: Recovery of rhenium from lean solutions by ion exchange and sorption methods

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 44-49

TOPIC TAGS: rhenium, rhenium extraction, column chromatography, ion exchange resin

ABSTRACT: The authors carried out systematic studies for the purpose of selecting the most suitable ion exchange resins for the adsorption of rhenium from solutions where the latter is present in amounts not exceeding 10-12 mg/l. The following anion exchangers were investigated with artificially prepared solutions: resins of low basicity (AN-1, AN-2F, AN-9?, AN-18, AN-21, AN-22); moderately basic resins (EDE-10P, NO, BAK); and highly basic resins (AV-18, AV-17, AV-27, AM, AMP, VDP, FEK, ASB-4, ASB-2, ASD-5, ASD-4, ASB-TIO, TFF, ASBF-1). The latter group was studied most thoroughly. The data obtained indicate that of all the resins

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ACCESSION NR: AT5002756

synthesized thus far, those most suitable for the recovery of rhenium from solutions of low rhenium content are AV-27, ASBF-1, and VDP. At the present time, the latter two resins have been prepared only under laboratory conditions. Orig. art. has: 3 figures and 7 tables.

ASSOCIATION: None

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 003 OTHER: 003

Card 2/2

L 23881-65 EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(b) Ps-4/Pu-4 IJP(c) JD/
ACCESSION NR: AT5002759 JG/MLK
S/0000/64/000/000/0066/0070

AUTHOR: Bibikova, V.I., (Doctor of technical sciences); Marunova, K.V.; Karyakin, A.V.; Petrov, A.V.

TITLE: Extraction method of obtaining pure ammonium perrhenate

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 66-70

TOPIC TAGS: rhenium, rhenium extraction, ammonium perrhenate, tributyl phosphate, potassium perrhenate, rhenium refining

ABSTRACT: The authors studied an extraction method for obtaining ammonium perrhenate from potassium perrhenate, which was found to be extracted best by tributyl phosphate from weakly acidic media (0.3 N HCl). The optimum conditions for this extraction were established, and a flow diagram of the process based on this extraction and resulting in ammonium perrhenate as the end product is given. The ammonium perrhenate obtained is sufficiently free of impurities to be used for the preparation of pure rhenium metal. The effectiveness of the purification of rhenium during extraction and reextraction was checked by using radioactive isotopes (K^{42}, Ni^{59}, ^{63}, Sn^{113}, ^{123}, Ca^{45}, S^{35}, Mo^{99},

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ACCESSION NR: AT5002759

Fe^{55}, ^{59}, and Cu^{64}). From the results obtained, the coefficients of purification, distribution, and separation were calculated. Infrared spectra of tributyl phosphate saturated with 0.3 N HCl and of tributyl phosphate rhenium extracts were found to be similar and led the authors to the conclusion that the extraction of rhenium proceeds via a hydration - solvation mechanism with the formation of the hydroxyl ion, H_3O^+, with the participation of water. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 003 OTHER: 002

Card 2/2

SAVITSKIY, Ye.M., doktor khim. nauk, otv. red.; RYABCHIKOV, D.I., doktor khim. nauk, red.; BIBIKOVA, V.I., doktor tekhn. nauk, red.; TYLKINA, M.A., kand. tekhn. nauk, red.; POVAROVA, K.B., kand. tekhn. nauk, red.; BORISOVA, L.V., inzh., red.; MAKARENKO, M.G., red.

[Rhenium; transactions] Renii; trudy. Moskva, Nauka, 1964. 257 p. (MIRA 18:1)

1. Vsesoyuznoye soveshchaniye po probleme reniya. 2d, 1962.

BIBIKOVA, V.I.

History of Holocene vertebrate fauna in Eastern Europe. Prirod. obst. i fauny prosh. no.1:119-146 '63. (MIRA 17:8)

ZALKINA, A.P., starshiy nauchnyy sotrudnik; SHRAGO, M.I., nauchnyy sotrudnik; BIBIKOVA, Ye.S.; SMIRNOVA, L.Ye.

Transfusion of the "intermediate layer" of stored blood in leucopenia, agronulocytosis, and thrombopenia. Vop.perel.krovi 4:165-174 '55. (MLRA 9:12)
(BLOOD—TRANSFUSION)
(LEUCOPENIA)
(AGRANULOCYTOSIS)

BIBIKOVA, Ye.S.

Accuracy of calculating the water volume by morphometric data.
Trudy TSIP no.68:100-111 '58. (MIRA 11:10)
(Amur River--Hydrology)

B'R[illegible]VA, Y[illegible]

Use of data of an overglazed [illegible] survey for the [illegible] of the flow [illegible] some rivers in the northeast of the U.S.S.R. Trudy T[illegible] no.[illegible] 3-50 '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205220011-8"

BIBIKOVA, Ye. V.

3(5)
SOV/7-59-6-14/17

AUTHORS: Baranov, V. I., Knorre, K. G.

TITLE: Chronicle. The VIII Session of the Commission for the Determination of the Absolute Age of Geological Formations (at the Otdeleniye Geologo-geograficheskikh nauk AN SSSR (Department of Geological-geographical Sciences AS USSR), May 18 - 22, 1959, Moscow)

PERIODICAL: Geokhimiya, 1959, Nr 6, pp 562 - 563 (USSR)

ABSTRACT: The 8th regular session of the (Commission on the Determination of the Absolute Age of Geological Formations) was held in Moscow from May 18 to May 22, 1959 at the Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy). A series of summarizing reports was held on age determinations in the most important parts of the USSR, which are to be presented to the 21st International Geological Congress. The following reports are concerned:

A. V. Polkanov, E. K. Gerling: Problems of the absolute age of the Precambrian of the Baltic Shield.

A. P. Vinogradov, L. V. Komlev, A. I. Tugarinov: The absolute age of the Ukrainian crystalline shield.

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F. P. Semenenko, Ye. S. Burkser, and N. N. Ivantishin: Age groups of the mineralization of the rocks of the Ukraine in their absolute age.

A. P. Vinogradov, A. I. Tugarinov, K. G. Knorre, and Ye. V. Bibikova, V. V. Zhirova, S. I. Zykov: The age of the Precambrian rocks of the crystalline fundament of the Russian Platform.

I. Ye. Starik, A. Ya. Krylov, M. G. Ravich, Yu. I. Silin: The absolute age of the rocks of the eastern part of the Antarctic continent.

A. Ya. Krylov: The absolute age of the rocks of the Tsentral'nyy Tyan' Shan' and the employment of the argon method for metamorphous and sedimentary rocks.

G. D. Afanas'yev: Results of the geochrony formations of the Caucasus.

L. P. Ovchinnikov and M. A. Garris: Age of the geological formations of the Urals and the Priural'ye (Cis-Urals).

N. I. Poleva and G. A. Nurina, G. A. Kazakov: Absolute age determination of the sedimentary and volcanic formations.

L. P. Krasnyy and N. I. Poleva: Absolute age of the magmatic

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rocks of the (Soviet) Far East.

L. V. Komlev: Absolute age of the granite intrusions of Kazakhstan.

The research work of a number of laboratories, RIAN, GEOKhI, LAGED, VSEGEI, ., UFAN, etc aroused great attention, especially a report of E. K. Gerling, Yu. A. Shukolyukov on the concentration of the isotope Ar^{38} in uranium minerals as well as the comprehensive research work carried out by the Vozrastnaya laboratoriya Akademiya nauk Gruzinskoy SSR (Laboratory of Age Determination of the Academy of Sciences of the Gruzinskaya SSR) under the application of isotopic dilution and flame photometry. The determination of the age of sedimentary rocks was discussed; A. Ya. Krylov proved in his report how well radiogenic argon is conserved in destroyed products of rocks such as boulders, sands, sandstones, clays, and muds. A. I. Tugarinov and S. I. Zykov were the first to attempt to determine the absolute age of sedimentary carbonate formations according to isotopic composition of lead.

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TUGARINOV, A.I.; ZYKOV, S.I.; BIBIKOVA, Ye.V.

Age of the oldest formations of the European Pre-Cambrian.
Geofiz. biul. no.15:38-43 '65. (MIRA 18:11)

S/007/63/000/003/002/003

AUTHOR: Tugarinov, A. I., Zykov, S. I., Bibikova, Ye. V.

TITLE: On determining of absolute age of sedimentary formations by the lead-uranium method

PERIODICAL: Geokhimiya, no. 3, 1963, 266-283

TEXT: Article deals with problem of determining age of sediments in absence of authigenic uranium or thorium minerals therein, which would be useful if present. The lead-uranium method, in combination with authigenic uranium concentrations, has been used with good results. Uranium bearing sulfides and apatites, as well as micaceous segments of sandstones and conglomerates, have proved the most suitable materials.

Results of age determination by this method are reported for Pre-Cambrian sedimentary rocks of the Ukraine, the Kursk magnetic anomaly and the Karelian ASSR.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR (Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, Academy of Sciences USSR), Moscow.

Card 1 of 1

TUGARINOV, A.I.; BIBIKOVA, Ye.V.; ZYKOV, S.I.

Metamorphism of uranium deposits and individual uranium minerals. Atom.energ. 16 no. 4:332-343 Ap '64. (MIRA 17:5)

L 04638-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AP6024391 SOURCE CODE: UR/0020/66/169/002/0328/0331

62
61B

AUTHOR: Chupakhin, M. S.; Bibikova, Ye. V.; Polyakov, A. L.

ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernatskiy, Academy of Sciences SSSR (Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR)

TITLE: Formation of thermionic ions with the aid of emitters

SOURCE: AN SSSR. Doklady, v. 169, no. 2, 1966, 328-331

TOPIC TAGS: ion emission, thermionic emission, semiconducting film, oxide

ABSTRACT: This is a continuation of work by one of the authors (Chupakhin, ZhAkh v. 17, 665, 1962 and v. 18, 1059, 1963, and earlier) dealing with enhanced emission of ions from various substances by using emitters with sorbent materials. A three-ribbon thermionic ion source was used to compare the ionizing ability of three widely used sorbents in mass spectroscopy, namely silica gel, aluminum-silica gel, and zirconium-silica gel. The main purpose of the investigation was to determine the mechanism whereby ionization is produced with the aid of emitters, since the high efficiency of the emitters seems to contradict the Langmuir-Saha equation. The indicator elements used were lead and zinc, controlled batches of which were deposited on sorbents made of nitric acid solutions of their salts. The evaporator temperature ranged from 1400 - 1700°, depending on the type of sorbent and on the heater material. It is concluded that during the heating of the evaporator, an emitter layer is produced from the sorbent, and simultaneously the atoms of the investigated element dif-

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L 04638-67

ACC NR: AP6024391

fuse into this layer. The emitter layer consists of oxides which are normally insulators, and acquire semiconducting properties at high temperatures, of the barrier-layer type. The surface of the emitter layer and the surface of the heater form a capacitor with high field intensity, thus enhancing the emission of ions. Various aspects of the mechanism are described in some detail. This interpretation does not contradict the Saha-Langmuir equation. The authors thank Academician A. B. Vinogradov for interest in this research. This report was presented by Academician A. B. Vinogradov 29 October 1965. Orig. art. has: 4 figures and 4 formulas.

SUB CODE: 20/ SUBM DATE: 25Oct65/ ORIG REF: 006

awm

Card 2/2

BIBIKSAROV, A.

Wrote about OL'khovets ship repairing plant of which he is director #1 and #2 Leningradskaya O., RSFSR

Soviet Source:
N; Re chndy #60 26 July 46, Moskva

...SHVILI, E. L.; BARNAVELI, T. T.; BIBILASHVILI, I. F.; GEGIASHVILI, G. A.;
...NVILI, A. K.: KOZAROV, R. Ye., KURIDZE, R. V.: KHALDEYEVA, I. V.

Investigation of the properties of pentrating components at a depth of 200 mwe.

Report submitted for the 8th Intl. Conf, on Cosmic Rays (IUPAP), Jaipur, India, 2-14 Dec 1963.

BIBILASHVILI, M.F.

USSR.

1229. Some examples of the decay of V-particles. G. E. CHIKOVANI, Z. SH. MANDZHAVIDZE, L. D. GEDEVANISHVILI AND M. F. BIBILASHVILI. Letter in *Zh. ėksper. teor. Fiz.*, 26, [redacted] In Russian.

In 1800 photographs taken at 3900 m with a cloud chamber in a field of 6800 gauss under 20 cm Pb, and activated by systems of counters responding to penetrating showers, 4 V-events were found. The 1st is the decay of a $2400 \pm 200 m_e$ V^0 into a proton (1·44 BeV/c) and negative meson (0·4 BeV/c). The coefficient $\alpha = (p_+^2 - p_-^2)/p_0^2$ is 0·61. The 2nd is probably $V^0 (667 \pm 70 m_e) \rightarrow \pi^+ (0{\cdot}12 \text{ BeV/c}) + \pi^-$ (0·34 BeV/c) with $\alpha = -0{\cdot}51$. The other 2 cases show changes of direction of 120° in a 0·4 BeV/c negative, and 36° in a 0·63 BeV/c positive track, respectively, and can be interpreted as decays of V^+.

W. J. SWIATECKI

BIBILASHVILI, M. F.

4 PMT

Investigation of cosmic rays under the earth. [illegible] Andronikashvili, M. F. Bibilashvili, [illegible] Sch[illegible], G. R. Khutsishvili. Bull. Acad. [illegible] 619-24(1955) (English translation).—See C.A. 50, 7617c

B. M. R.

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APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205220011-8"

BILILASHVILI, M.F.

ANDRONIKASHVILI, E.L.; BILILASHVILI, M.F.; SAKVARELIDZE, I.I.; KHUTSISHVILI, G.R.

Underground investigation of cosmic rays. Izv. AN SSSR.Ser.fiz.19 no.6: 681-686 N-D '55. (MLRA 9:4)

1. Institut fiziki Akademii nauk Gruz.SSR.
(Cosmic rays) (Nuclear physics)

BIBILASHVILI, M.F.

JANOSSY, L.

21(1)

PHASE I BOOK EXPLOITATION SOV/2911

International Conference on Cosmic Radiation. Budapest, 1956.

International Conference on Cosmic Radiation Organized by the Hungarian Academy of Sciences. Budapest, 1957. 187 p. 200 copies printed.

Sponsoring Agency: Magyar Tudomanyos Akademia

Eds.: L. Janossy, and A. Somogyi

PURPOSE: This report is intended for geophysicists concerned with cosmic radiation.

COVERAGE: This report contains/the six plenary sessions of the conference. Some of the problems dealt with include nuclear emulsions, extensive air showers and the program of cosmic ray measurements planned for the International Geophysical Year. Most of the reports are followed by references. Soviet scientists in the field of cosmic radiation who attended the conference are: E.L. Andronikashvili, N.A. Dobrotin, I.I. Gurevich, S.I. Nikolskiy and S.N. Vernov. The articles are written in English, German and Russian without parallel translations.

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THIRD SESSION

EXTENSIVE AIR SHOWERS

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Bibilashvili, M.F.

AUTHOR ANDRONIKASHVILI, E.L., BIBILASHVILI, M.F., PA - 2712

TITLE The Spatial Distribution of the Hard Components of the Broad Atmospheric Showers.
(O prostranstvennom raspredelenii pronikayushchey komponenty shirokikh atmosfernykh livey, Russian)

PERIODICAL Zhurnal Eksperim.i Teoret.Fiziki,1957,Vol 32, Nr 2,pp 403-404 (U.S.S.R.)
Received 5/1957 Reviewed 6/1957

ABSTRACT The authors investigated this spatial distribution in an altitude of 400 m above sea level in a tunnel situated 26,6m below the surface of the earth (65,5 m water equivalent). The density of the hard particles was measured at distances of 0,10, 20, 30, 45 and 60 m from the symmetry axis of the separating system and the showers were separated by means of a tube selector. In addition, the measuring device contained correlated hodoscopic systems for the determination of the total numbers of the particles and the location of the transition of the trunk of the broad atmospheric showeras well as a subterranean one for recording the particles of the hard components. The showers were recorded by means of a cinematographic apparatus. Showers with from 10^5 to 5.10^5 particles were recorded best. The data determined in the course of 2156 working hours of this device are shown in a table. The experimental data obtained in this way are approximated satisfactorily within the statistical limits of errors by a GAUSS' distribution of the form $\eta(r)=0,61 \exp[-0,00059 r^2]$
While carrying out measurements the authors did not take the angular distribution of the "trunks" of the broad atmospheric shower and the in-

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The Spatial Distribution of the Hard Components of the Broad Atmospheric Showers. PA - 2713

accurate determination of their origin into account, consideration of both distributions shows that the axes of the broad atmospheric showers deviate from the axis of the subterranean experimental arrangement. The computed spatial distribution of the density of the hard particles obtained on the basis of the corrected data obeys a GAUSS'law of the type $\eta(r) = (0{,}66 \pm 0{,}09)\exp[-(0{,}00058 \pm 0{,}00009)r^2]$. By means of this distribution, the value $(3{,}5 \pm 1{,}1).10^3$ particles was found for the total number of the hard particles. Computation of the minimum values of the energy of the hard components in 65,6 m water equivalent provides the value 5.10^{13} eV, while the soft component of the same shower at sea level has an energy of 3.10^{13} eV. Hence it follows, that at sea level at least 75% of the energy of a broad atmospheric shower is concentrated in its hard components.
(3 ill.)

ASSOCIATED Physical Institute of the Academy of Science of the Grusinian SSR
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BIBILASHVILI, K. F. Cand Phys-Math Sci-- (diss) "Study of spatial distribution of the penetrating component of atmospheric cloudbursts." Tbilisi,1 58. 8 pp (Tbilisi State U im Stalin), 150 copies (KL,48-58,101)

BIBILASHVILI, M.F.

Spatial distribution of the penetrating component in extensive air showers. Trudy Inst.fiz.AN Gruz.SSR 6:141-164 '58.
(MIRA 15:4)

(Solar radiation)

S/749/60/007/000/001/001

AUTHORS: Andronikashvili, E. L., Bibilashvili, M. F., Dekanosidze, Ye. N., and Kazarov, P. E.

TITLE: On the selection of extensive air showers with [illegible] particles and on the determination of their electron-photon component parameters (In Georgian, with a 4-page Russian résumé).

SOURCE: Akademiya nauk Gruzinskoy SSR. Institut fiziki. Trudy, v.7, 1960, 3-18.

TEXT: This is the description of a shower-selecting array for the investigation of the penetrating component of extensive cosmic-ray air showers, and an explanation of methods for the determination of optimal parameters for such a system. In 1958 the Institute of Physics, AS GruzSSR, constructed a 150-m long tunnel with varying depth (200 mwe max.) for the investigation of the penetrating component of extensive air showers (EAS). A surface laboratory with a ramified selection array was built above the tunnel to select, detect, and determine the EAS. Optimum system parameters and optimal observational conditions were calculated on electronic computers. Since the location of the shower axis and the total number of particles can be found by measurement at 3 points of an EAS plane of observation, a standard pattern consisting of an equilateral triangle (circumradius 20 or 40 m) was used, with groups of EAS counters and hodoscopic counter groups: the triangle

was periodically moved and set up at different longitudinal stations of the tunnel. Using an accuracy of the density determination of 30%, the number of counters in a single hodoscopic counter group was specified to be 23-24. The spatial distribution function of the electron-photon component used was that proposed by Nishimura and Kamata, as approximated by K. Greizen (Progr. in Cosmic Ray Phys., v. III, Amsterdam, 1956, 1-141). Calculations are described for the determination of the probability of fixing the shower with the selection system. The calculation of the differential-distribution function of all showers fixed by the array according to the number of particles is shown. Additional parameter calculations indicate that it is statistically advantageous to employ the smaller triangle and make a greater number of measurements. Triangles of yet smaller sizes are not practicable, since the advantage of speedier pickup of large EAS would be gained only at the risk of missing small showers altogether. There are 8 figures, 1 (unnumbered) table, and 7 Russian-language Soviet papers and 1 English-language paper (by K. Greizen, cited in text of abstract).

ASSOCIATION: None given.

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ANDRONIKASHVILI, E. L., BIBILASHVILI, M. F., VARDENGA, G. L., GVALADZE, T. V., JAVRISHVILI, A. K., KAZAROV, R. E., KURIDZE, R. V. and KHALDEIVA, I. I.

"Angular Distribution of the Penetrating Component of Extensive Air Showers at the Depth of 200 m.w.e."

Report presented at the International Conference on Cosmic Rays and Earth Storm, 4-15 Sep 61, Kyoto, Japan.

Physical Institute, Academy of Sciences, Georgia SSR

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S/048/62/026/005/019/022
B108/B102

3.2410

AUTHORS: Andronikashvili, E. L., ~~Bibilashvili, M. F.,~~ Vardenga, G. D., Gvaladze, T. V., Dzhavrishvili, A. K., Kazarov, R. Ye. Kuridze, R. V., and Khaldoyeva, I. V.

TITLE: Angular distribution of the penetrating component of extensive atmospheric showers at a depth of 200 m water equivalent

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 682-684

TEXT: The angular distribution of the axes of extensive atmospheric showers was determined by various methods, mainly using a cloud chamber. The direction of the axis was established from the electron-photon component. At a distance of 0.5H or less from the shower axis (H = depth at which the detector is placed under the surface), the particle distribution is given by $I_\vartheta = I_0 \cos^{8.3}\vartheta$, as has been established by various authors. The present authors' results agree with this law. There are 2 figures.

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ACCESSION NR: AP4040897 S/0251/64/034/003/0545/0551

AUTHORS: Barnaveli, T. T.; Bibilashvili, M. F.

TITLE: Scintillation device for distinguishing wide atmospheric bombardments and the determination of the angle of inclination of their axes

SOURCE: AN GruzSSR. Soobshcheniya, v. 34, no. 3, 1964, 545-551

TOPIC TAGS: scintillation counter, atmosphere, meson particle, particle shower/ FEU 33 photomultiplier, RK49 cable, OK 19 oscillograph, 6S3P lamp

ABSTRACT: The authors described an apparatus for measuring the space distribution of μ-meson components of wide atmospheric bombardments (ShAL). The apparatus consists of scintillation counters distributed with FEU-33 photomultipliers. An impulse from each of the photomultipliers is repeated by a cathode repeater on a 6S3P lamp, is branched, and again repeated at two cathode repeaters similar to the first. The impulse leaves one of the repeaters unchanged and leaves the other after being formed on a short segment of cable RK-49 of 40-cm length. A special signal-mixing device receives the signal from the cable, and then an amplifier circuit receives the impulses which are next displayed on oscillograph OK-19 where a photographic device records them. Data were presented on the specifications of the

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devices used, including diagrams of the circuits involved. A coordinate system was defined whereby the angle of inclination of the axis of a ShAL could be determined. The technique of determining the angle involves interpreting data from the scintillation counters to locate and measure the ShAL front. Tests with 215 bombardments revealed close agreement with prior work by other authors. The authors predicted an accuracy of determination of inclination angle of $\pm 7^{0}$ through proper use of the system. Orig. art. has: 10 equations and 5 figures.

ASSOCIATION: Institut fiziki, Tbilisi, AN Gruzinskoy SSR (Institute of Physics, AN Georgian SSR)

SUBMITTED: 20Nov63 ENCL: 00

SUB CODE: ES NO REF SOV: 001 OTHER: 001

Card 2/2

ACCESSION NR: AP4042889 S/0251/64/035/001/0059/0066

AUTHOR: Barnaveli, T. T., Bibilashvilli, M. F., Dzhavrishvili, A. K., Grubelashvili, G. A., Kazarov, R. Ye., Kuridze, R. V. Khaldeyeva, I. V.,

TITLE: Investigation of the spatial distribution of mu-mesons in extensive atmospheric showers at a depth of 200 meters (water equivalent)

SOURCE: AN GruzSSR. Soobshcheniya, v. 35, no. 1, 1964, 59-66

TOPIC TAGS: meson, mu meson, atmospheric shower, cosmic ray, nuclear physics, atmospheric physics, meson spatial distribution

ABSTRACT: A study of the spatial distribution of the penetrating component of extensive atmospheric showers has been made in the underground laboratory of the Institut fiziki Akademii nauk Gruzinskoy SSR (Institute of Physics of the Academy of Sciences of the Georgian SSR). The selected geometry of the experiment ensured measurement of the density of the mu-meson flux to a distance of 80-100 m from the shower axis. An attempt was made to compute the total quantity of penetrating particles with a minimum energy of 40 Bev and their contribution to the energy balance of the shower and to detect nonuniformities in the mu-meson flux. Determination of the mu-meson component characteristics at a

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ACCESSION NR: AP4042889

depth of 200 m (water equivalent) required determination of the direction of arrival of the axis of the shower because the distance between the mu-meson detectors underground and the axis of the shower recorded at the surface is dependent on the angle of inclination of the axis. Arrangement of the underground apparatus is shown in Fig. 1 of the Enclosure. Scintillation apparatus was used for detecting showers and the inclination of their axes. A pulse from the coincidence circuit of this apparatus triggers both the OK-19 oscillograph and a blocking generator controlling the operation of two modulators using TGI-1-130/10 thyratrons, one of which triggers the pulse hodoscopes situated on the surface around the buiiding, as shown in Fig. 2 of the Enclosure; another thyratron controls the underground mu-meson detectors. The underground part of the apparatus consists of a system of eight hodoscopic detectors, each separated by lead blocks 10 cm thick. Each detector has an area of 0.5 m^2 and the total area of the underground detectors is 4 m^2; each detector has a triple-coincidence circuit. During the 1,920 hours of operation the underground detectors were triggered 415 times. The mean dimension of showers (with respect to quantity of particles) was 6 x 10^5. Densities are given in a table. An expression is given for the distribution, and the results are compared with similar work done at the NIIYaF MGU. Orig. art. has: 3 formulas, 6 figures and 1 table.

ASSOCIATION: Institut fiziki Akademii nauk Gruzinskoy SSR, Tbilisi (Physics Institute, Academy of Sciences of the Georgian SSR)

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BARNAVELI, T.T.; BIBILASHVILI, M.F.; GRUBELASHVILI, G.A.; DZHAGRISHVILI, A.K.; KAZAROV, K.Ya.; KORIDZE, R.Z.; KHALILEYEVA, Z.V.

Properties of the penetrating component of extensive air showers at a depth of 200 meter water equivalent. Izv. AN SSSR. Ser. fiz. 28 no.11:1894-1895 N '64. (MIRA 17:12)

1. Institut fiziki AN GruzSSR.

BARNAVELI, T.T.; BIBILASHVILI, M.F.

Scintillation apparatus for the determination of extensive air showers and of the angle of inclination of their axes. Soob. AN Gruz. SSR 34 no.3:545-551 Je '64 (MIRA 18:1)

1. Institut fiziki AN Gruzinskoy SSR, Tbilisi. Submitted November 20, 1963.

SOV/49-59-2-11/25

AUTHORS: Balabanova, V. N., Bibilashvili, N. Sh., Kartsivadze, A. I., Kiryukhin, B. V. and Sulakvelidze, G. K.

TITLE: Experiments on the Stimulation of Cumulus Clouds in the Alazani Valley (Opyty po vozdeystviyu na kuchevuyu oblachnost' v Alazanskoy doline)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 2, pp 262-275 (USSR)

ABSTRACT: The Alazani valley (Fig 1) is often affected by the hail from the cumulus cloud developing over the Caucasus Mountains. In an attempt to prevent the hail falling on the valley, experiments on affecting the hail formations by means of artificial stimulation were carried out in 1956 by the Institute of Applied Physics, Academy of Sciences, USSR, in conjunction with the Institute of Geophysics of the Georgian SSR and the Faculty of Physics of Leningrad University. A method of generating silver iodide smoke from ground level was used because seeding from aircraft proved to be too difficult in this mountainous area (the circle in Fig 1). The smoke was produced from red phosphorus which reached the cloud in 5 to 10 minutes. It was found that the best results were obtained where the ratio of silver iodide to phosphorus was 1:2. The amount of 2 kg of silver iodide gave a full crystallization of 1 km^3 of cloud

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at the temperatures -5 to -10°C. The effect of sunlight in these circumstances was found to be negligible. The weather conditions were forecast the evening before the day of the experiments. The air lift was checked by means of the pilot balloons each time the smoke was produced. The formation of the nucleus in the cumulus cloud was followed on the radar screen and at the same time it was filmed. The height of the cloud was measured with theodolites. The results are presented in the form of a Table on pp 264 and 265. The data given are (from left to right): date, experiment number, place of experiment, amount of reagent in kg, time and height of the isotherms 0° and 6°C, time and height of cloud top, zone number and time of nuclei formation, remarks on visual observations. The remarks are as follows:
Experiment Nr 1 - precipitation at 15.30 hours from the cloud spot where smoke entered - then cloud dispersed;
2 - cloud dispersed at 14.20 hours.
3 - no results observed.
4 - cloud subsided between 14 and 15 hours.

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5 - cloud breaking and dispersing, formation of crystallic forms.
6 - cloud dispersed during first 30 minutes.
7 - no results observed.
8 - first raindrops from the affected spot at 13.40 hours followed by hail and rain at 14 hours.
9 - first raindrops from the affected spot, rain started 17.20 hours.
10- cloud breaking at the affected spot.
11- hail at 10.20 hours.
12- weak rain at 13.45 hours, followed by cloud dispersing above place of experiment.
13- a weak precipitation at 11.35 to 11.40 becoming intensive at 12.25 from affected spot.

The locations of the cloud nucleus for various dates are shown in Figs 2, 5, 7, 9 and 10. The photographs of the smoke from some experiments are shown in Figs 3, 4, 6, 8 and 11. The following conclusions were made, based on the experiments:
1) The success in some cases suggests the possibility of rain stimulation by seeding the silver iodide into cloud composed of super-cooled drops at certain weather conditions.

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2) In order to ascertain the results, the analysis of the complex data of the physical conditions of the cloud (such as stratification of the atmosphere, the cloud energy, visual observation on cloud formation and precipitations, radar observation of nuclei, etc) should be made.
3) The characteristic feature of the formation of the artificial nuclei by means of smoke is their lower height (1.5 to 2 km) in comparison with the natural conditions.
4) As the smoking is not always practicable, some other methods of cloud stimulation should be investigated (from pilot balloons etc).
5) The vital moment of affecting the cloud is when it reaches the region of -5 to -10°C. However, because of the very high speed of hail formation (20 m/sec), that moment can be easily misjudged. Therefore, in order to prevent this, an investigation of a possibility of the air layer stimulation should be carried out.
6) The experiments on combustion with red phosphorus show that

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a method of determination of the action of hydroscopic matter on a warm part of the cloud should be investigated.
7) It is important to obtain more data on the necessary amount of the active chemicals which can be applied for cloud stimulation. There are 11 figures, 1 table and 5 references; 1 of the references is Soviet and 4 are English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki (Academy of Sciences USSR, Institute of Applied Geophysics)

SUBMITTED: January 20, 1958.